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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/684,470  | 10/06/2000  | David W. Bainbridge  | 2400/14             | 4045             |
| 7590  | 10/24/2003  |                      | EXAMINER            | VO, HAI          |
| Jack C. Sloan, Esq.<br>Dorr, Carson, Sloan & Birney, P.C.<br>3010 East 6th Avenue<br>Denver, CO 80206 |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1771                |                  |

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                   |
|------------------------------|-----------------|-------------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)      |
|                              | 09/684,470      | BAINBRIDGE ET AL. |
|                              | Examiner        | Art Unit          |
|                              | Hai Vo          | 1771              |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 14 August 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1,3,4,7,20,23 and 36-71 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,3,4,7,20,23 and 36-71 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

1. Claims 2, 5, 6, 8-19, 21, 22 and 24-35 have been cancelled in the amendment received on 08/06/2003.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 3, 4, 7, 20, 23, and 36-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasahara et al (US 4,034,506). Kasahara discloses a porous foam plate disposed on the surface of water contained in the casing comprising an aggregate of foamed polyethylene beads having a diameter 10 mm (abstract, column 7, line 39). Kasahara discloses the foamed polyethylene beads being coated with a liquid adhesive that represents about 52 wt% of the foam plate (reference example, column 7, lines 5 and 11). Kasahara discloses a porous foam plate having a porosity of 37 volume percent and continuous open spaces among the adjacent beads (column 7, lines 38, and abstract). Likewise, it is apparent that the foam plate is breathable. Since the foam of Kasahara meets all the requirements of the claims (plastic beads coated with an adhesive that is cured from a liquid state while in initial contact with the beads and the amount of the adhesive meeting the specific range set out in the claims, and the bead size within the claimed range), it is the examiner's position that hardness would be inherently present.

Kasahara does not specifically disclose the padding material useful for athletic equipment, medical equipment, mechanical equipment, and perishable goods. Since athletic equipment, mechanical equipment, and perishable goods are not part of the padding material structure but rather its intended uses. The intended use limitations have not given weight for patentability. It has been held that a recitation with respect to the manner in which a claimed padding material is intended to be employed does not differentiate the claimed padding material from a prior art porous foam plate satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The preamble “construction material”, “packaging material” and “filter material” have not given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

Further, Kasahara does not specifically disclose the padding material useful as a construction material. However, it appears that the porous foam plate of Kasahara having high strength, light weight and low density which makes it adaptable to such uses as a light weight structural core for composite laminates.

Kasahara does not specifically disclose the padding material useful as a packaging material. However, the lightweight of the porous foam plate provides

ideal packaging for the containers because of its cushioning or energy absorbing property and is therefore particularly suitable as a packaging material.

Kasahara does not specifically disclose the padding material useful as a filter material. Gollan (US 3,674,684) is relied on as evidence that teaches the filter material for removing the oil from the oil-water mixture comprising a solid absorbent material. Suitable filtering material for oil-water mixtures include porous, easily compressible material such as polystyrene foam beads (column 7, lines 40-50). Therefore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous foam plate as a filter material because such is the intended use of the material.

With regard to claims 3, 4, it appears that Kasahara is using the same plastic material to make the beads as Applicants, such as polyethylene or polystyrene resins (column 2, lines 64-65). It is the examiner's position that elasticity and inelasticity properties would be inherently present. This is in line with In re Spada, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

With regard to claim 7, Kasahara discloses a porous foam plate disposed on the surface of water contained in the casing comprising an aggregate of foamed polyethylene beads having a diameter 2 to 20 mm (column 2, line 66) within the claimed range.

With regard to claims 20, 23, 40, 41, 46, 47, 52, 53, 64, 65, 70 and 71, Kasahara does not specifically that the plastic beads are corona plasma treated.

However, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the porous foam plate of Kasahara is identical to or only slightly different than the claimed elastic belt prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity (plurality of adhesive coated plastic beads). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Kasahara.

4. Claims 1, 3, 4, 7, 20, 23, and 42-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritschel (US 3,856,721). Fritschel discloses that a syntactic foam for uses in instrument packaging is made of a blend of plastic beads and a liquid copolymer of butadiene-styrene and vinyl toluene (column 1, lines 5-10, 60-63, and column 2, lines 1-10). Fritschel discloses the syntactic foam comprising 80 parts of the copolymer and 20 parts of plastic beads (table I). The plastic beads have a diameter from 20 microns to 1 inch (0.02 to 25.4 mm) encompassing the claimed range (column 1, line 67 et seq.). Since the syntactic foam of Fritschel meets all the requirements of the claims (plastic beads coated with a copolymer that is cured from a liquid state while in initial contact with the beads and the amount of copolymer in the syntactic foam meeting the specific range set out in the claims, and the bead size encompasses the claimed range),

it is the examiner's position that breathability, copolymer hardness and porosity of the foam would be inherently present. Applicant states that the bead size differential helps give the applicant's padding materials their quality of "breathability" (page 12 of the amendment dated 12/03/2003). Fritschel discloses the beads having the size within the range required by the claims (column 1, line 67 et seq.), therefore; the examiner found no reasons that the syntactic foam of Fritschel could not inherently have the breathability as the padding material of the present invention. For preamble and intended use limitations, see discussions in paragraph no. 3.

With regard to claims 3, 4, Fritschel discloses the plastic bead including polyethylene, ABS (column 2, lines 7-8). It appears that Fritschel is using the same plastic material to make the beads as Applicants, such as polyethylene or polystyrene resins (column 2, lines 64-65). It is the examiner's position that elasticity and inelasticity properties would be inherently present. This is also in line with In re Spada.

With regard to claims 20, 23, 46, 47, 52, 53, 64, 65, 70 and 71, Fritschel does not specifically state that the plastic beads are corona plasma treated. However, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the porous foam plate of Fritschel is identical to or only slightly different than the claimed elastic belt prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity (plurality of adhesive coated plastic beads).

It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Fritschel.

5. Claims 1, 3, 4, 7, 20, 23 and 36-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nickerson et al (US 6,301,722). The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the

same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

The claim language does not require the bead completely coated with an adhesive. Nickerson discloses a breathable padding material comprising a plurality of plastic beads having an average diameter between 0.05 to 0.5 inch (1.27 to 12.7 mm) (column 7, line 5) within the claimed range. The plastic beads are integrally joined to each other and outer layers 3, 5 by an adhesive (figure 27). Likewise, it is clearly apparent that the plastic beads are partially coated with an adhesive. The adhesive is cured from a liquid state (column 6, lines 28-30). Nickerson discloses the beads having significant interstitial spaces and volume 35% of the total volume of the block (column 6, line 43). Nickerson is silent as to the amount of the adhesive. However, such a variable would have been recognized by one skilled in the art to join the plastic beads to each other and the plastic beads to the outer layers. As such, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the adhesive having the amount instantly claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Since the padding material of Nickerson meets all the requirements of the claims (plastic beads partially coated with an adhesive that is cured from a liquid state while in initial contact with the

beads and the bead size falling within the claimed range), it is the examiner's position that hardness would be inherently present.

With regard to claims 3, 4, the beads are made from thermosetting and thermoplastic materials (column 3, lines 60-65). It appears that Nickerson is using the same plastic material to make the beads as Applicants, such as polyethylene or polystyrene resins (column 2, lines 64-65). It is the examiner's position that elasticity and inelasticity properties would be inherently present.

This is also in line with *In re Spada*.

With regard to claims 20, 23, 40, 41, 46, 47, 52, 53, 64, 65, 70 and 7, see product-by-process rational in the paragraph no. 3.

#### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 3, 4, 7, 20, 23 and 36-71 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-43 of U.S. Patent No. 6,301,722. Although the conflicting claims are not

identical, they are not patentably distinct from each other because of the reasons set forth in the paragraph no. 5.

***Response to Arguments***

8. The art rejections over Kasahara and Fritschel have been maintained for the following reasons. Kasahara and Fritchel do not specifically disclose that the padding material for athletic equipment, medical equipment, mechanical equipment, and perishable goods. Since athletic equipment, mechanical equipment, and perishable good are not part of the padding material structure but rather its intended use. The intended use limitations have not given weight for patentability. It has been held that a recitation with respect to the manner in which a claimed padding material is intended to be employed does not differentiate the claimed padding material from a prior art porous foam plate satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The preamble “construction material”, “packaging material” and “filter material” have not given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

Further, Kasahara or Fritchel does not specifically disclose the padding material useful as a construction material. However, it appears that the porous

foam plate of Kasahara having high strength, light weight and low density which makes it adaptable to such uses as a light weight structural core for composite laminates.

Kasahara does not specifically disclose the padding material useful as a packaging material. However, the lightweight of the porous foam plate provides ideal packaging for the containers because of its cushioning or energy absorbing property and is therefore particularly suitable as a packaging material.

Kasahara or Fritchel does not specifically disclose the padding material useful as a filter material. Gollan (US 3,674,684) is relied on as evidence that teaches the filter material for removing the oil from the oil-water mixture comprising a solid absorbent material. Suitable filtering material for oil-water mixtures include porous, easily compressible material such as polystyrene foam beads (column 7, lines 40-50). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous foam plate as a filter material because such is the intended use of the material.

9. The art rejections over Nickerson have been maintained because no declaration or statement to show that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on M,T,Th, F, 8:30-6:00 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV

DANIEL ZIRKER  
PRIMARY EXAMINER  
GROUP-1300  
1700

*Daniel Zirker*